



2023

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BS5837 2012 TREE SURVEY

Niall Rodger

Proposed Extension, 9 Parsonage Close , Nafferton YO25 4HH



Ridings Forestry

UK LTD

Monday, February 6, 2023

Instructions

This tree survey gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows when building works are proposed. It follows, in sequence, the stages of planning and implementing the provisions which are essential to allow the development to be integrated with the trees.

A tree survey is required to be carried out in accordance with BS5837:2012. The survey is to include a tree schedule for all trees that are shown on the attached drawings, an impact assessment and a method statement for protecting the trees during the construction period.

1) Introduction

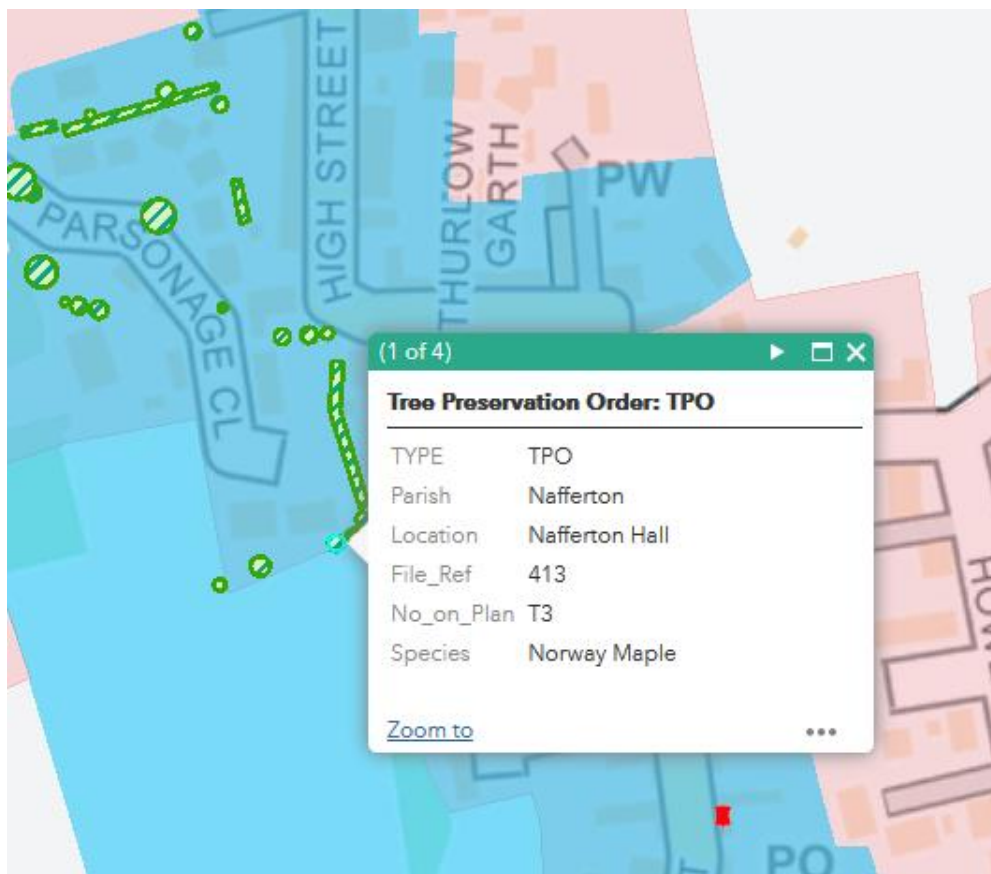
This report provides information in accordance with recommendations given in British Standard 5837:2012 for a proposed extension at 9 Parsonage Close, Nafferton, YO25 4HH, East Riding of Yorkshire.

3) Date of Inspection

The trees were inspected on the 6 February 2023. Weather conditions were sunny.

4) Historical/Background Information

A new extension is proposed at 9 Parsonage Close, Nafferton, YO25 4HH, East Riding of Yorkshire. The site is located within the Nafferton Conservation Area and Some trees within the property's boundary are protected by Nafferton Hall Tree Preservation Order. Please see below.



5) Survey Data Collected

Tree ref

Species

Height

DBH

Crown Spread N S E W

Height from Ground to Crown

Age Class

Physical Condition

Structural Condition

Other Comments

Management Recommendations

Safe Life Expectancy

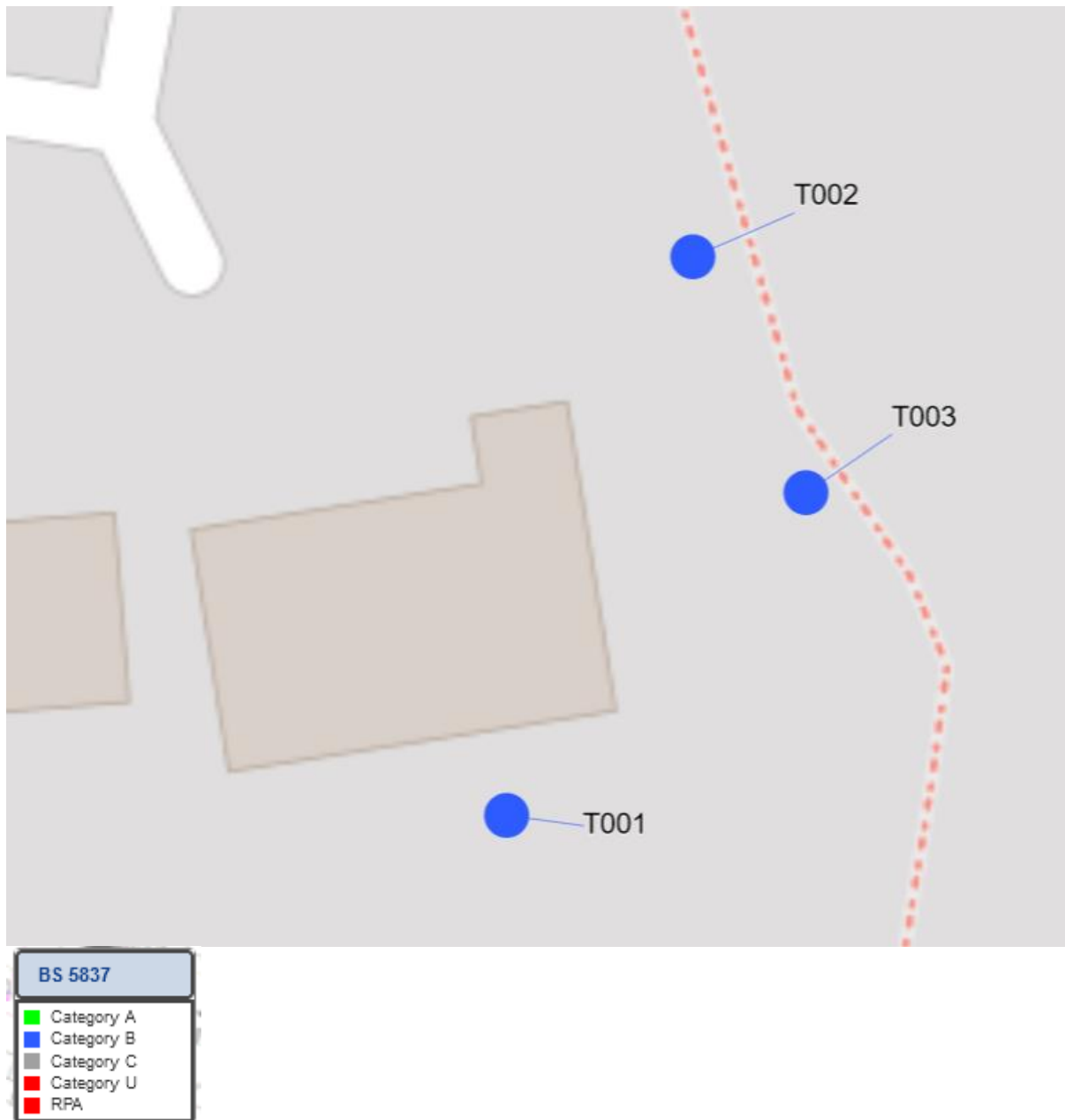
6) Wildlife & Countryside Act

Birds and Bats are protected by the above act. No roosts or nests were noted during the tree survey. However, should anything be noted when any works are to undertaken Natural England must be contacted.

7) Development Report

The locations of the trees and their grades in relation to BS 5837 2012 are shown on the Plan A below.

Plan A



T001 is the only tree directly affected by the proposed extension. Please see picture below.



If panning is granted, acces will be gained through the garden to the east of the property. This will invlove building materials and possibly small plant using this narrow strip of land

between the property boundary fence and the existing dwelling. T2 & T3 are located on the eastern boundary of the property. Their root protection areas will require protection. Please see photograph below.

T2 & T3



7.1.) Tree Constraints Plan

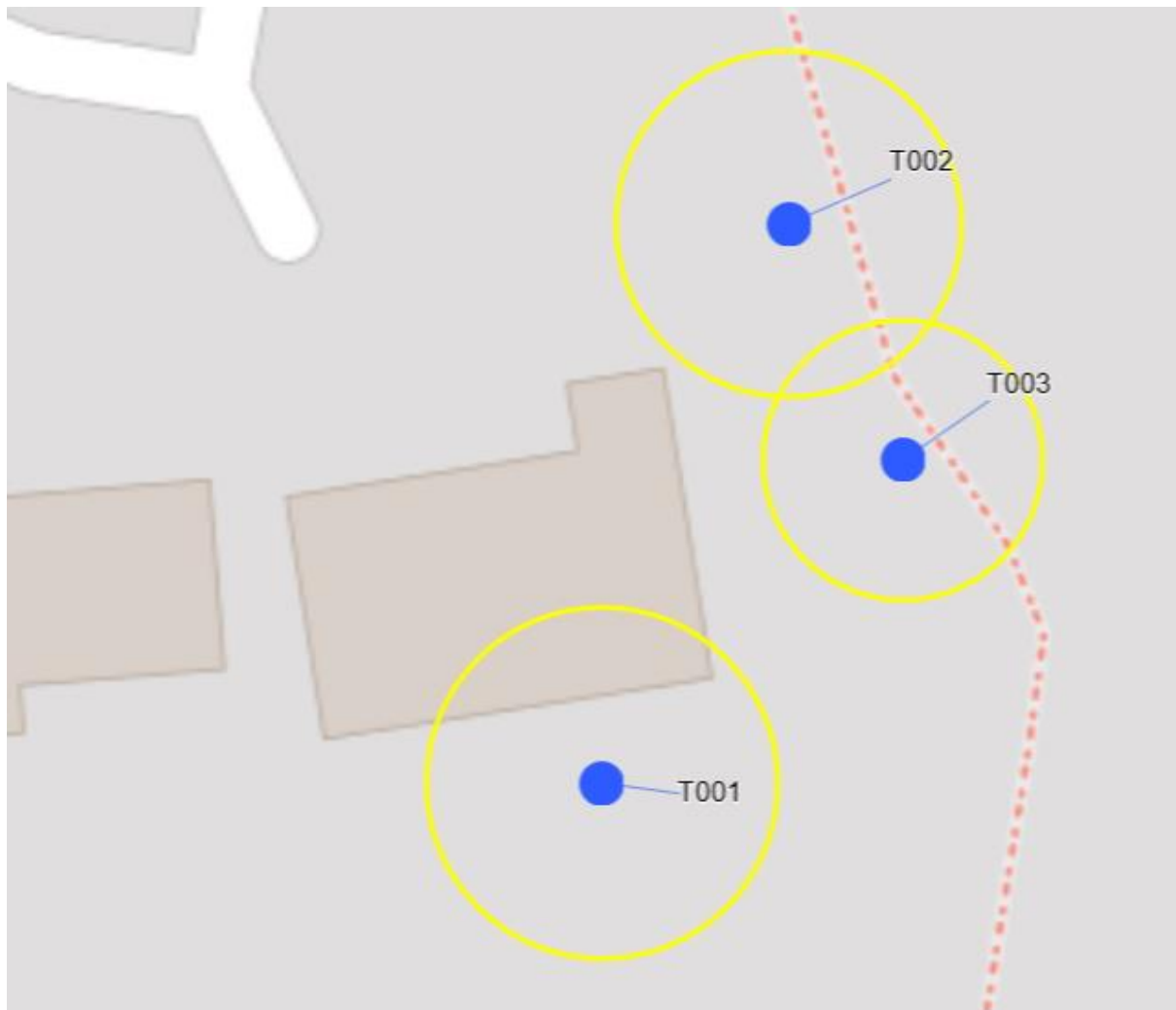
All survey data and work recommendations can be found in Appendix B of this report.

7.2) Root Protection Areas

Following the criteria laid out in BS5837, in my opinion there are no Grade A trees

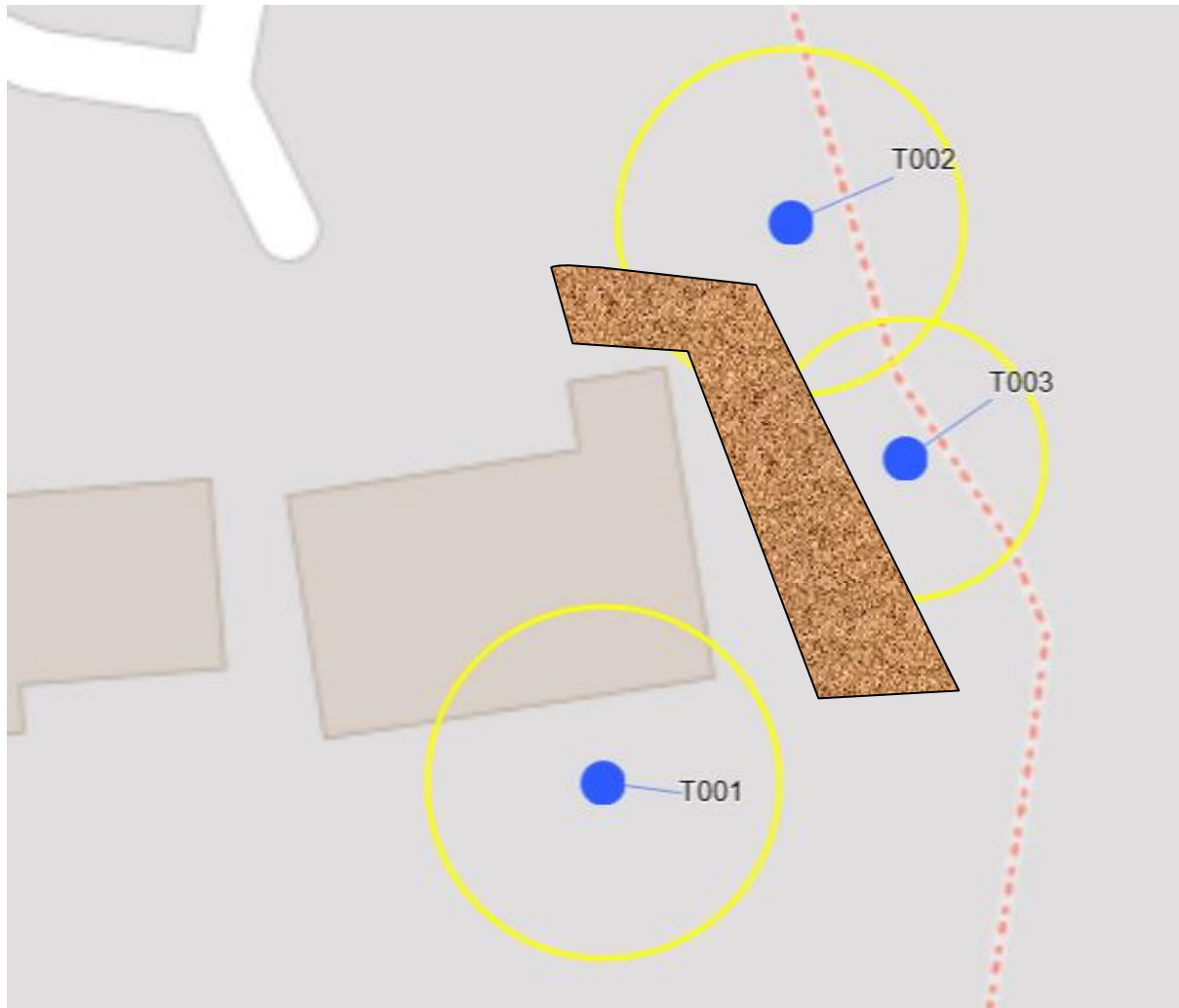
Root Protection Areas

The root protection distances for the trees have been included in the survey schedule. Details of the fencing are given in appendix A.

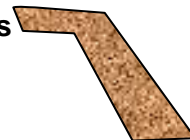


7.3) Tree Protection Plan

Ground protection should remain in place for the duration of the build.



Ground Protection for Plant Machinery and Pedestrians



8) Arboricultural Implications Assessment

8.1) Impact on trees

T001 (Norway Maple) is the only tree directly effected by the proposed development and has been classed as Grade B. It appears that T001 (T003 on the original Tree Preservation Order) is the sole survivor of a group of maple trees. An application to fell this group of trees was made in 1986. I have not seen any Notice of Decision regarding this application.

T001 displays good overall physiological and structural condition. The tree is in the rear garden and is not a dominant feature in the overall street scene of Parsonage Close. There are many trees within the boundary of the property. T002 and T003 are dominant features of the surrounding area. I have recommended that temporary ground protection be put in place should planning be granted.

The proposed new extension would be sited well within the Root Protection Area (RPA) of T001. Clearly this is very close to the main stem (Approximately 2 metres). Since the Tree Preservation Order was made the tree has obviously grown taller and wider. The tree holds a dominant position over the house. Roots will also have grown along with the tree. There is a possibility, due the closeness of the tree to the main property, of direct damage by tree roots occurring.

There are methods of building within the RPA. Much of the damage that can be done to trees by construction occurs below the ground, and so when planning to build within an RPA, foundation design is critical. One of the most significant issues of building around trees is severing roots. Essentially this means that traditional trench foundations in RPAs are out, unless they will only clip a small area. However, a preferred alternative to traditional foundations when building in RPAs is to use small diameter piles. Piled foundations limit potential damage to roots during installation and ensure no part of the tree bears the loads from the structure.

There are two types of piling systems that can be employed within the RPA. One is Micro piling the other is Screw Piling. Micro piling involves hitting the piles into the ground whilst screw piles are rotated into the ground using a handheld or excavator mounted torque head. Installation occurs at a constant speed, inducing no vibration and requiring no pre-auguring. A screw pile displaces a comparatively small amount of soil & tree roots compared to a traditional micro pile. The helices attached to the screw pile shaft are deliberately made from thin steel plate, with a blunt protruding edge to ensure that where possible, roots are moved out of the way during installation rather than severing them. The pile shaft is considerable smaller than that of a micro pile so again, displacement of soil and tree roots is minimised. Should a micro pile come into contact with a root, the root would be severed.

Clearly there is no way that a pile can be installed through an existing root system without causing some damage, however it is key to the health of the tree to minimise this effect as much as possible. As previously discussed, micro piling requires the removal of all material in the position of the pile, including any tree roots encountered. Typically screw piles are used in combination with a cast concrete ground beam system. This system is generally flexible enough to allow pile to be adjusted on site if any large tree roots are encountered and need to be avoided.

Although T001 has been classed as a Grade B Tree, it is my opinion that the tree is too close to the existing property and has become over domineering. This was most likely highlighted in 1986 when an application was made to fell T3, T4, T5 and T6, of which only T3 remains. There has been a number of trees planted along the southern boundary. T2 and

T3 shown on Plan A are the part of G1 from the original Tree Preservation Order(TPO). From the trees and species described in the Order it is clear from the site visit that these are now depleted in number. The remaining trees have all been classed as mature. To maintain tree cover within the area it would be prudent to undertake some new planting to diversify age structure of trees in the area, especially in the area of G1.

Although it would be possible to build within the RPA of T001 with the techniques described, I do feel that T001 is too close to the existing property. Taking into account the trees growth since the last application to fell the tree was made, along with the trees non-prominent position within the rear garden of the property, I would recommend that the tree be removed and a number of other trees planted around the boundary of the site to promote continuous tree cover in the Nafferton Conservation Area.

8.2) The construction exclusion zone: barriers and ground protection

All trees which are being retained on site should be protected by barriers and/or ground protection, as recommended. Vertical barriers should be erected, and ground protection installed before any materials or machinery is brought onto the site and before any demolition, development or stripping of soil commences. Once erected, barriers and ground protection should be regarded as sacrosanct, and should not be removed or altered without prior recommendation by an arboriculturist and approval of the local planning authority.

8.3) Barriers

Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). On all sites, special attention should be paid to ensuring that barriers remain rigid and complete.

In most cases, barriers should consist of a scaffold framework in accordance with Figure 2 comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3 m. Onto this, weld mesh panels should be securely fixed with wire or scaffold clamps. Weld mesh panels on rubber or concrete feet are not resistant to impact and should not be used.

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NOTE the above is preferred because it is readily available, resistant to impact, can be re-used and enables inspection of the protected area.

GROUND PROTECTION ERECTED ON SITE TO PROTECT TREES SHOULD BE CLEARLY SIGNED AS BELOW.

TREE PROTECTION



DO NOT MOVE

8.4) Access and Space for Construction

All building materials will be stored on hard standing or 15 metres away from any retained trees.

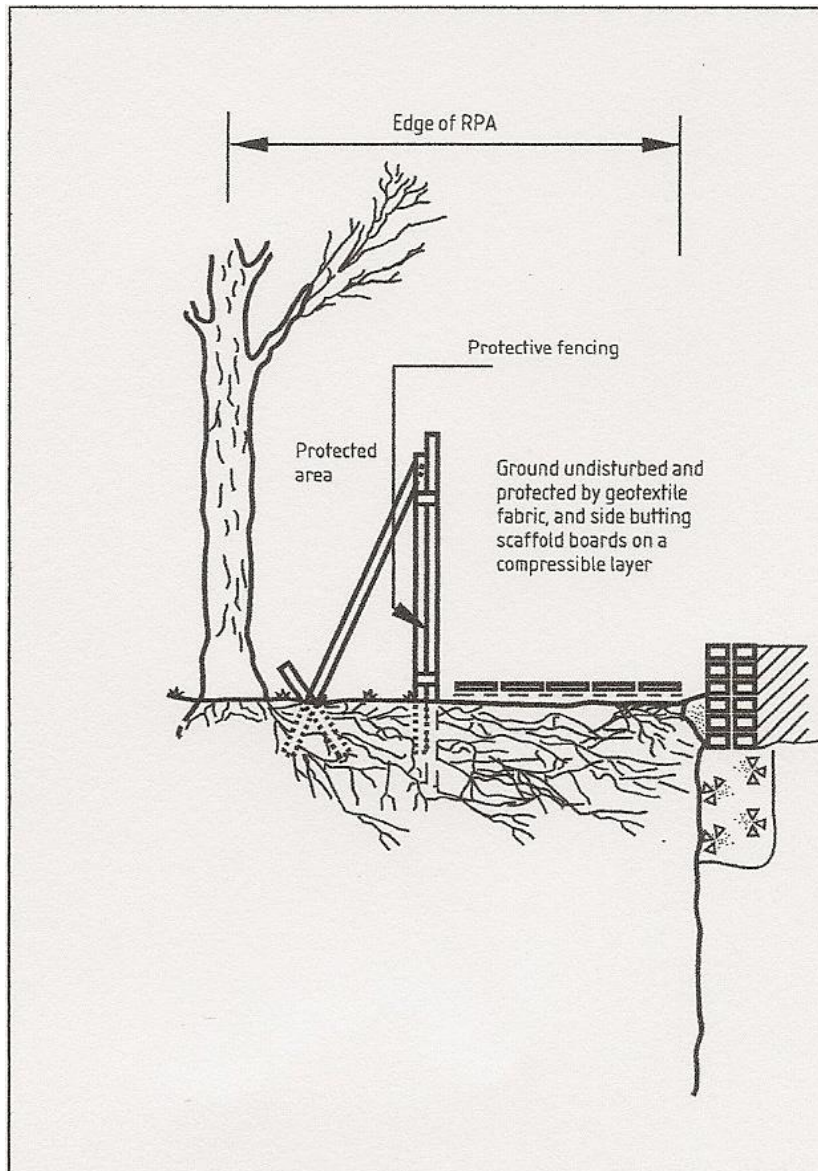
8.5) Services

No details of services have been provided.

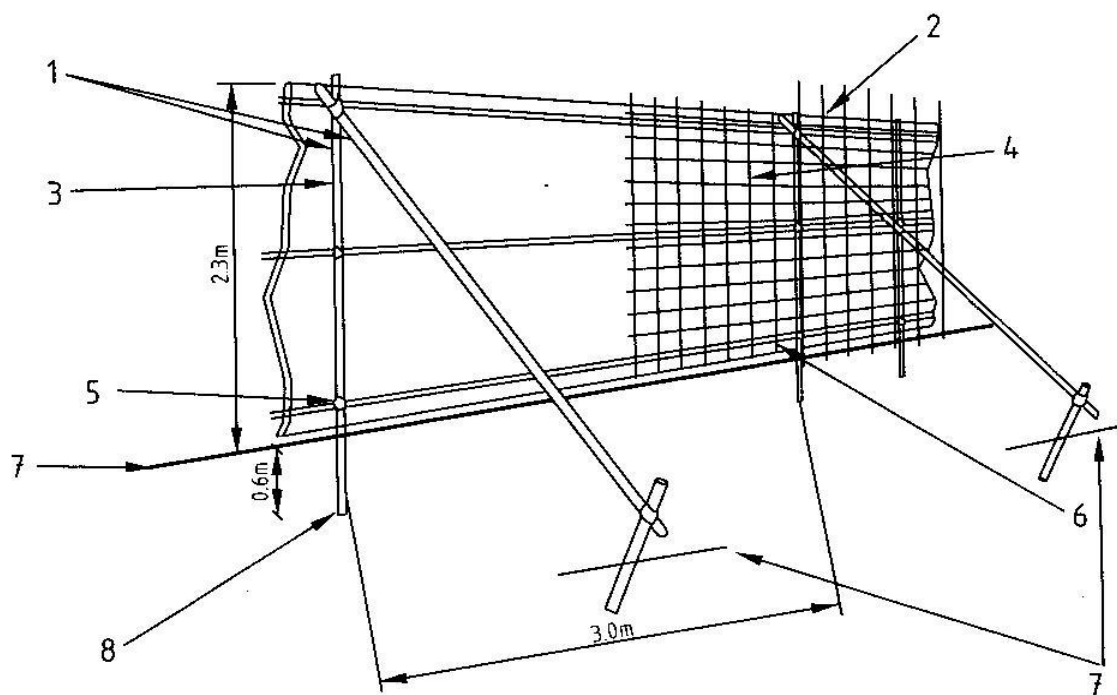
Appendix A Tree Protection

Tree Protection Fencing

Class 1 Fencing



Class 2 Fencing



- | | |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 1 Standard scaffold poles | 5 Standard clamps |
| 2 Uprights to be driven into the ground | 6 Wire twisted and secured on inside face of fencing to avoid easy dismantling |
| 3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps | 7 Ground level |
| 4 Weldmesh wired to the uprights and horizontals | 8 Approx. 0.6 m driven into the ground |

Figure 2 — Protective barrier

Appendix B
Tree Survey

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Tree Work Recommendations